

TCTAUUGUCG (SEQ ID NO:3) and GTATUUCUAG (SEQ ID NO:4) are instances of the generic probe sequence XXXXUUXUXX. In certain embodiments, a set of gapped probes comprises probes representing every instance of the designate nucleotides of the generic probe sequence.

---

At page 6, line 20, please replace the paragraph beginning "Fig. 9" with the following substitute paragraph:

---

2  
Fig. 7 illustrates (a) Hamiltonian and (b) Eulerian paths in the graph associated with a given target sequence. Both paths provide ambiguous reconstructions. The seventeen nucleotide target sequence is SEQ ID NO:1. The incorrect sequences shown at right correspond to SEQ ID NO:5.

---

#### REMARKS:

The amendments provided herein are merely for the purpose of entering the SEQ ID Nos. corresponding to the amended sequence listing filed herewith. No new matter is introduced.

#### MARK-UP SHOWING AMENDMENTS WITH BRACKETS AND UNDERLINES:

At page 4, the paragraph beginning at line 31 with the words "The systems and methods" and continuing onto page 5, should be replaced with the following substitute paragraph:

The systems and methods described herein further pertain to sequencing chips carrying a set of gapped probes. A set of gapped probes, as the term is used herein, refers to a collection of probes having the same generic probe sequence, e.g., at least ten instances of the generic probe sequence. A generic probe sequence describes a pattern of designate and universal nucleotides, e.g., XXXXUUXUXX. An instance of a generic probe sequence is a sequence of designate and universal nucleotides which conforms to the pattern of the generic probe sequence, e.g., TCTAUUGUCG (SEQ ID NO:3) and GTATUUCUAG (SEQ ID NO:4) are instances of the generic probe sequence XXXXUUXUXX. In certain embodiments, a set of gapped probes comprises probes representing every instance of the designate nucleotides of the generic probe sequence.

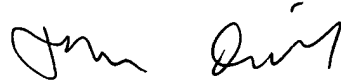
At page 6, line 20, the paragraph beginning "Fig. 9" is amended as follows (please note that the paragraph was previously amended by the Response filed on Aug. 23, 2001):

Fig. 7 illustrates (a) Hamiltonian and (b) Eulerian paths in the graph associated with a given target sequence. Both paths provide ambiguous reconstructions. The seventeen nucleotide target sequence is SEQ ID NO:1. The incorrect sequences shown at right correspond to SEQ ID NO:5.

We believe that we have appropriately provided for fees due in connection with this submission, however, if there are any other fees due in connection with the filing of this Response, please charge the fees to our **Deposit Account No. 06-1448**.

If there are any questions after review of this paper, the Examiner can contact the undersigned as (617) 832-1272.

Respectfully submitted,  
FOLEY, HOAG, & ELIOT



---

John D. Quisel  
Reg. No. 47,874  
Agent for Applicants

November 29, 2001

Patent Group  
Foley, Hoag & Eliot LLP  
One Post Office Square  
Boston, MA 02109-2170  
Tel: (617) 832-1000  
FAX: (617) 832-7000